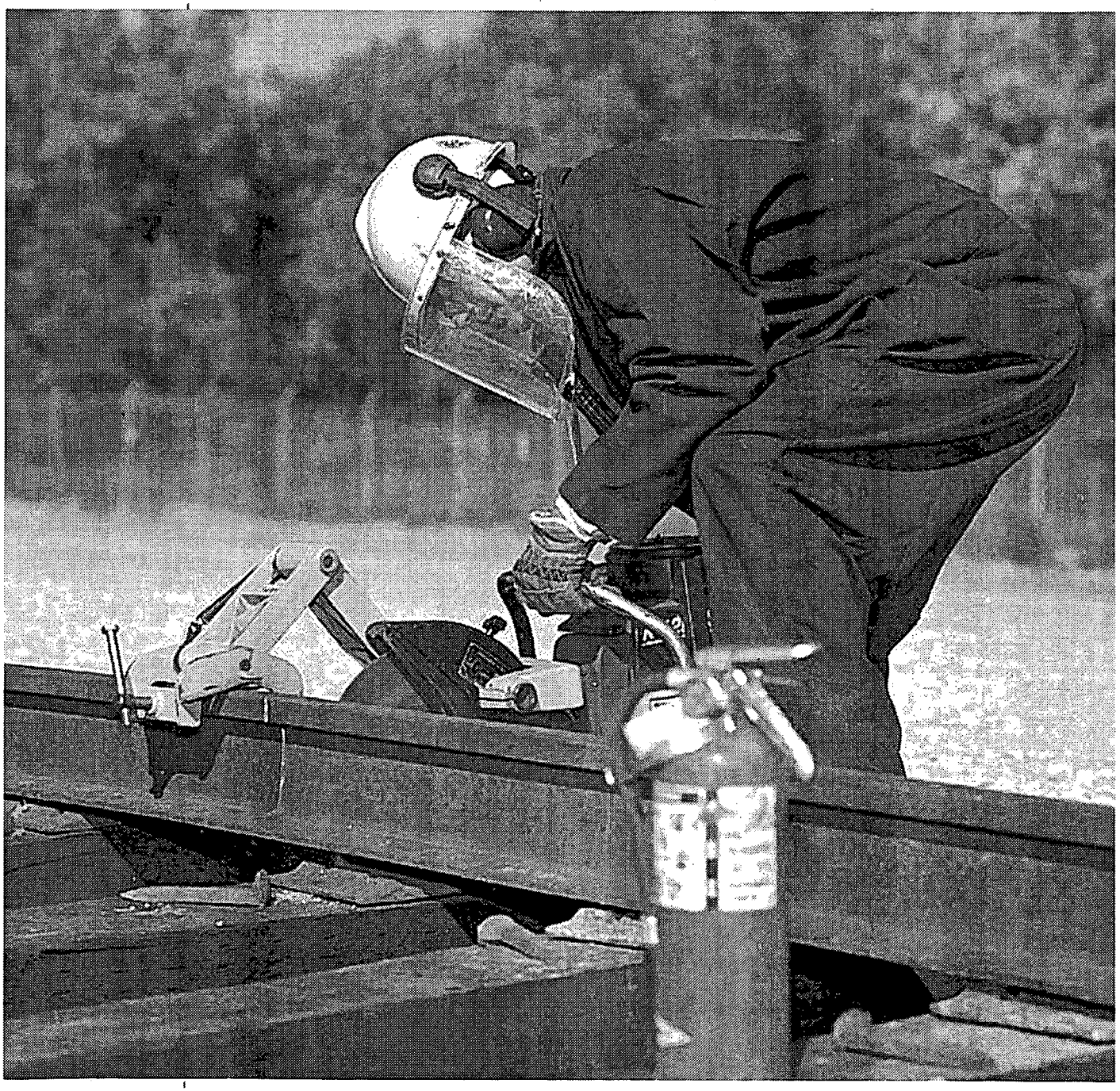
fernald Report

Inside

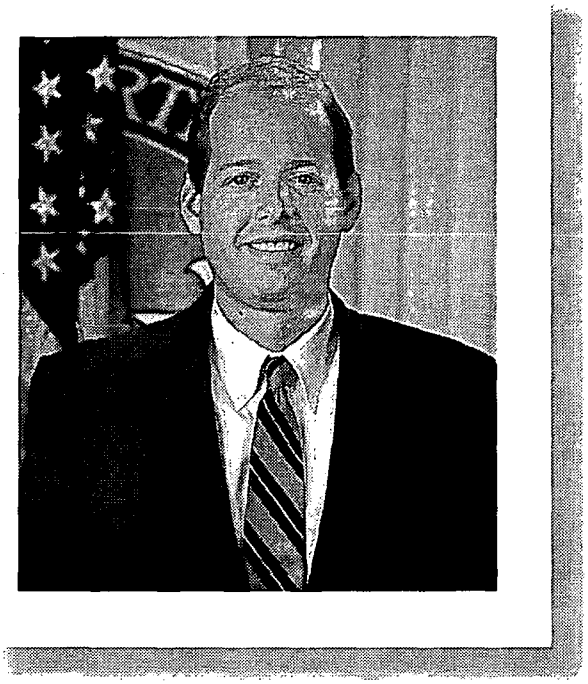
November 1997



message from
Jack Craig

Fernald Awards Waste Pits Cleanup Subcontract

I am pleased to announce that the Fernald Environmental Management Project has awarded the subcontract to cleanup Fernald's waste pits. International Technologies (IT) Corporation will design and construct a thermal drying facility to treat approximately one million tons of low-level radioactively contaminated waste from Fernald's six waste pits, a clearwell and a burn pit. The subcontractor will then load the waste materials into railcars for shipment to an offsite disposal facility. IT Corp. has successfully completed thermal drying projects throughout the United States and brings considerable technical experience to our site.



Valued at $122 million, the eight-year subcontract has been structured to place more responsibility for performance on IT Corp. As an example, rather than paying IT Corp. for startup costs, the company must finance its own construction and capital investment expenses upfront. Fluor Daniel Fernald will pay IT Corp. when the subcontractor safely delivers the end product — thermally treated waste loaded in railcars for off-site shipment. DOE and Fluor Daniel Fernald believe this project management approach called ARASA—or Alternative Remedial Action Subcontracting Approach--will result in significant cost savings because IT Corp. shares a clear stake in the project's success.

For the next several months IT Corp. will be engaged in planning and design work. DOE and Fluor Daniel Fernald will offer the public opportunities to meet representatives from IT Corp. and provide input to the process. This subcontract is the cornerstone procurement for the Waste Pits Remedial Action Project and we look forward to a successful kickoff and implementation.

Jack Craig
Director, DOE-FN

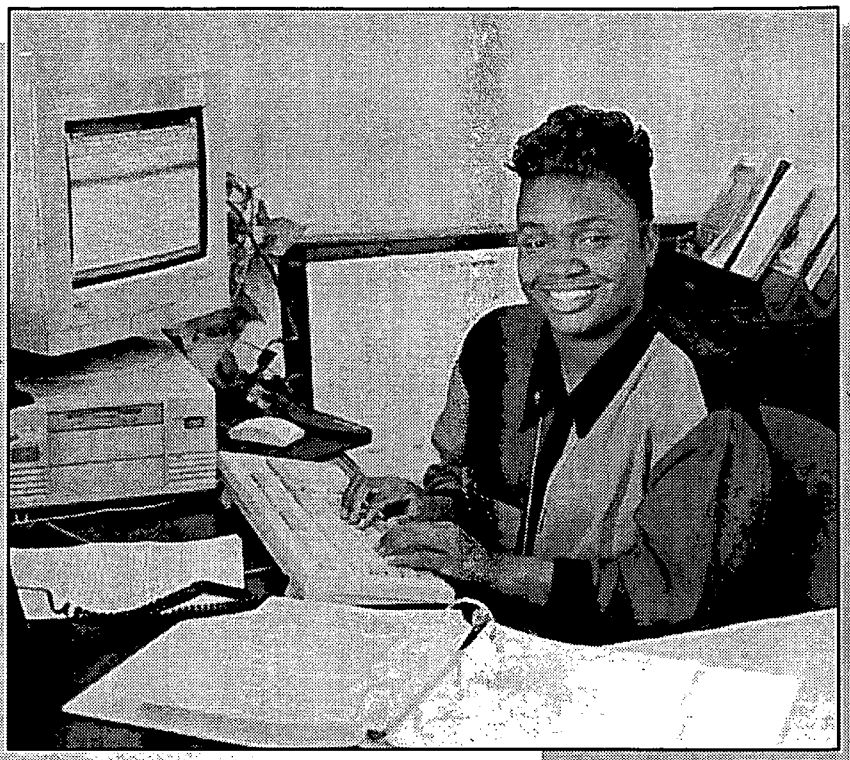
Fernald Welfare-to-Work Program Receives White House Honors

In recognition of Fernald's successful participation in President Clinton's Welfare-to-Work program, Energy Secretary Federico Peña presented Bob Folker, DOE-OH acting manager, and John Bradburne, Fluor Daniel Fernald president, with letters of commendation signed by Vice President Al Gore at a ceremony at DOE headquarters in October.

Peña thanked Folker and Bradburne for their efforts to improve the welfare system by offering people the chance to move from public assistance to work. "I applaud your willingness to help these individuals realize their full potential," he said. "You have my thanks and the thanks of the President and Vice President."

Currently, 22 former welfare recipients have been hired by the Department of Energy — six of those new hires are employed by Fluor Daniel Fernald. "Fluor Daniel Fernald fully supports the president's Welfare-to-Work program," Bradburne said. "We're proud to have hired one-third of the participants currently working in the DOE complex."

Both the Ohio Field Office and Fluor Daniel Fernald look forward to continuing their participation in the program, and helping DOE reach its ultimate goal of hiring 50 welfare recipients while working within the parameters of ongoing workforce restructuring.



Terri Streater, a former welfare recipient, is the friendly face visitors now see as they enter the Records Center. (6745-9).

Enriched Uranium Materials Sold

A contract was approved in October for the sale of approximately 38 percent of Fernald's enriched uranium materials. Uranium materials included in the sale are 1,424,038 net pounds of uranium trioxide; 673,338 net pounds of uranium tetra fluoride; 495,378 net pounds of uranium metal in the form of derbies and ingots; and 7,351 net pounds of uranium dioxide, for a total of 2,600,105 net pounds.

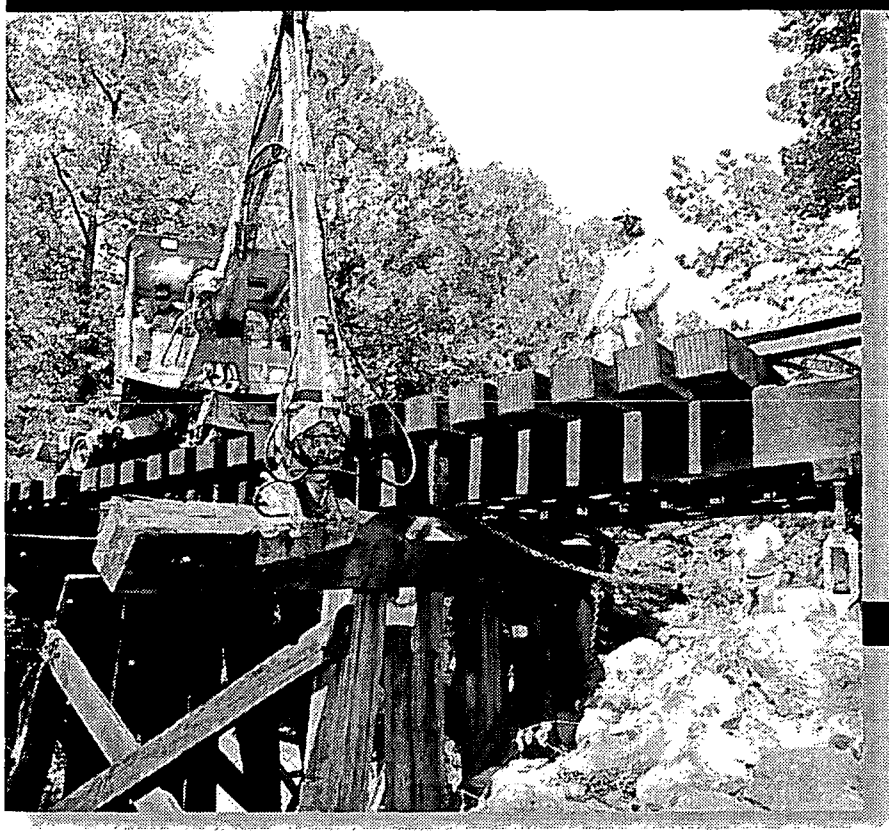
A pack-out station is being constructed in Plant 6 to repackage uranium trioxide from T-hoppers to 55-gallon drums. Then the material will be loaded into International Standards Organization (ISO) containers and shipped by truck to the Port of Baltimore. From there containers will be transported by vessel to the buyer who will process it into commercial reactor fuel. The shipments are expected to be complete by December 1998.

This sale will facilitate the accelerated cleanup plan and will realize an alternate disposal cost avoidance of approximately $2.2 million.

Uranium trioxide stored in 131 T-hoppers will be repackaged into 55-gallon drums for shipping. (5758-7)

Cleanup **Progress** Update

Operable Unit 1



Waste Pits Remedial Action Project (WPRAP)

On-site activities associated with rail infrastructure upgrades to support the project continued during the month. Under the category of offsite activities, the Okeana, Camp Run, and Wynn Road trestle upgrades were completed, while the Paddy's Run upgrade is still in progress.

WPRAP also awarded a contract for procurement of radiological equipment to be used in surveying loaded railcars, and most importantly, awarded the Alternate Remedial Action Subcontracting Approach (ARASA) subcontract to International Technology Corporation for remediation of the waste pits. *(see feature article on page 2).*

Operable Unit 2

On-Site Disposal Facility (OSDF)

Installation of the OSDF Cell 1 compacted clay liner was completed and installation of the secondary composite liner began. Installation of leachate lines/manholes for the Leachate Conveyance System was completed, and final testing of the system was initiated.

The Relocated North Entrance Road opened on October 20, 1997, after completion of paving, shoulder work, and painting. All gravel base and geotextile installation on the Haul Road was finished, and asphalt paving began on the southern and northern portions of the road.

Above; Workers replacing trestle supports. (6349-1071)

Right; Muriel Vigus conducts FDFQA oversight of the geosynthetic clay liner (GCL) deployment in Cell 1. (6319-805)

Far Right; Shearing operations on the south side of the old Boiler Plant. (6407-279)

Operable Unit 3

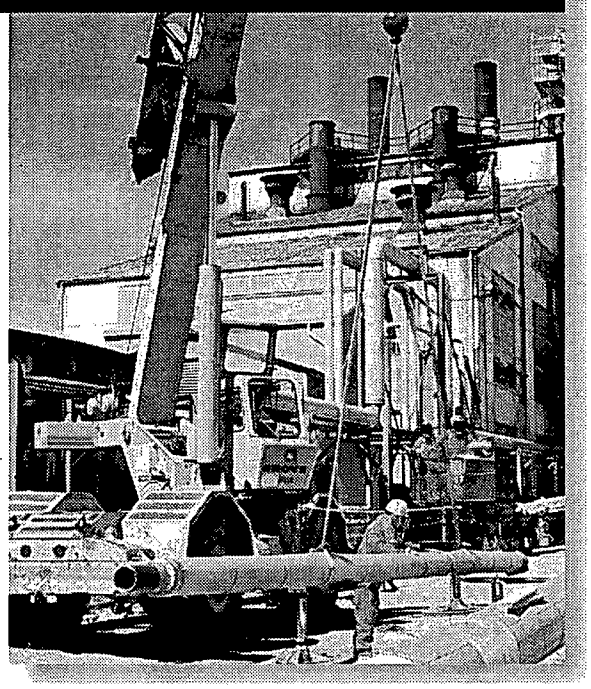
Safe Shutdown

Removal of holdup material took place in selected areas of Plant 2/3, Plant 8, and Plant 6; energy isolations were completed on Buildings 78 and 81, and the process trailers. Underground utility lines for Plants 6 and 8 were excavated.

Decontamination & Dismantlement (D&D)

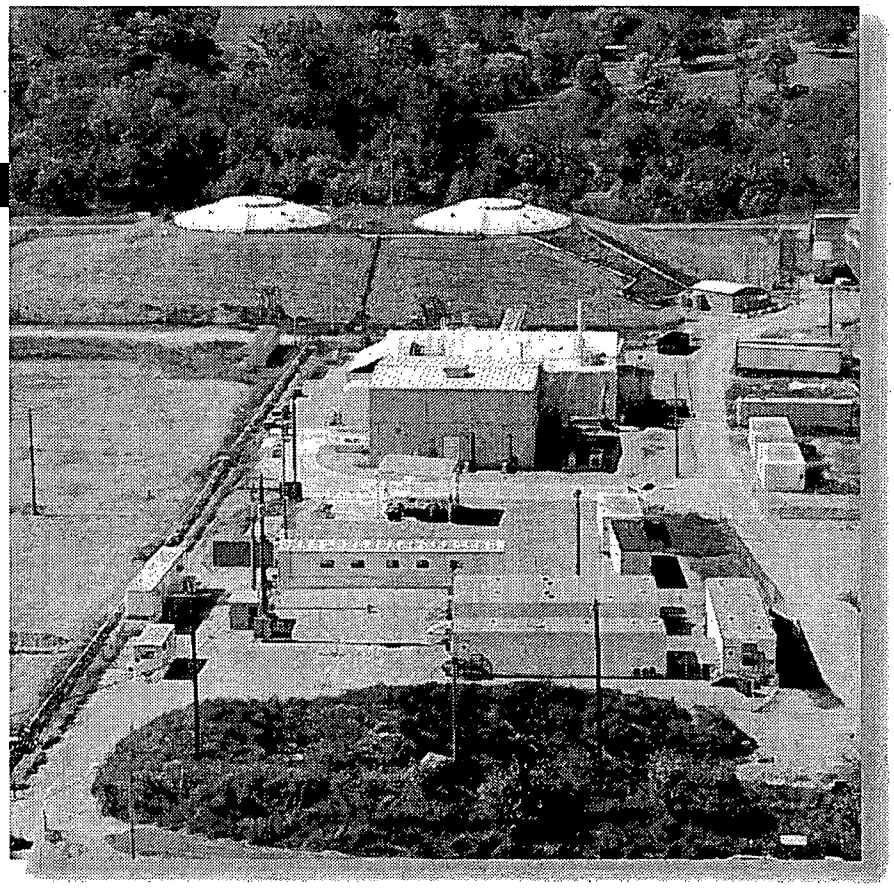
Asbestos abatement and equipment removal continued in the Boiler Plant/Water Plant area; both the Water Plant and the Railroad Scale House were demolished, and debris from demolition activities were sized, segregated, and containerized.

Preparation activities commenced in the Thorium/Plant 9 Complex, with the installation of subcontractor office trailers, utilities, and work zone boundaries.



Left; Workers removing process piping from a pipe bridge. (6407-244)

Below; The extraction and treatment of the radium bearing waste within Silos 1 and 2 is one of the greatest challenges facing Fernald engineers. (6718-36)



Operable Unit 4

Silos Projects

Preparation of the Multitech Proof-of-Principle Request for Proposal (RFP) for Silos 1 and 2 was initiated, and responses to the *Commerce Business Daily* announcement concerning this RFP were gathered.

U.S. EPA comments on the Silo 3 draft *Explanation of Significant Differences* were received, comment responses and a revised ESD were submitted back to both U.S. EPA and Ohio EPA for approval. The draft Final RFP for the Silo 3 Waste Project was revised to reflect recent changes in funding for the project.

Development of a design basis for a potential Transfer Tank Area and an associated Radon Control System also began during October.

Cleanup **Progress** Update

Operable Unit 5

Right; Tim Smith of the Soil and Water Project performing injection testing on a new well. (6261-147)

Below; Pipefitters connecting waterlines as part of the AWWT expansion. (5531A-939)

Aquifer Restoration & Waste Water Project

Construction continued on the Advanced Wastewater Treatment (AWWT) facility expansion and on the AWWT Ion Exchange Regeneration System. The latter project is approaching full completion; some system operability testing has already been initiated. Drilling has begun on monitoring wells for the Injection Demonstration System and extraction wells for the South Plume Optimization Project.

Operable Unit 5

Soils Characterization & Excavation Project

Downed trees and metal debris were removed from Paddy's Run channel along with approximately 35-cubic-yards of contaminated soil in response to an embankment erosion problem recently discovered west of the K-65 silos. A conceptual design of the recommended actions needed to deal with the erosion was presented to regulators. Field samples are being conducted to monitor the Paddy's Run embankment erosion as well as to support data generation for remediation efforts in Area 1 Phase II (southern half of East Field).

The Prefinal Area 2 Phase I (Southern Waste Units) Integrated Remedial Design Package was submitted to the regulators on October 23. This package contains area-specific implementation plans/ approaches, design drawings, technical specifications and other supporting documents required to conduct soil remediation.

Waste Management

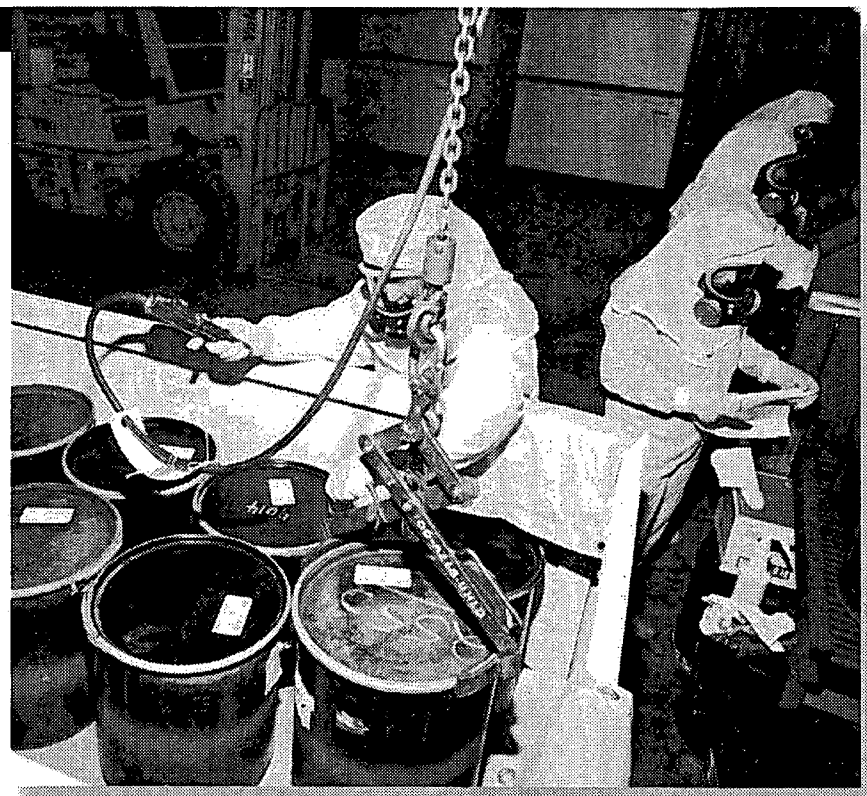
Nuclear Materials Disposition Projects

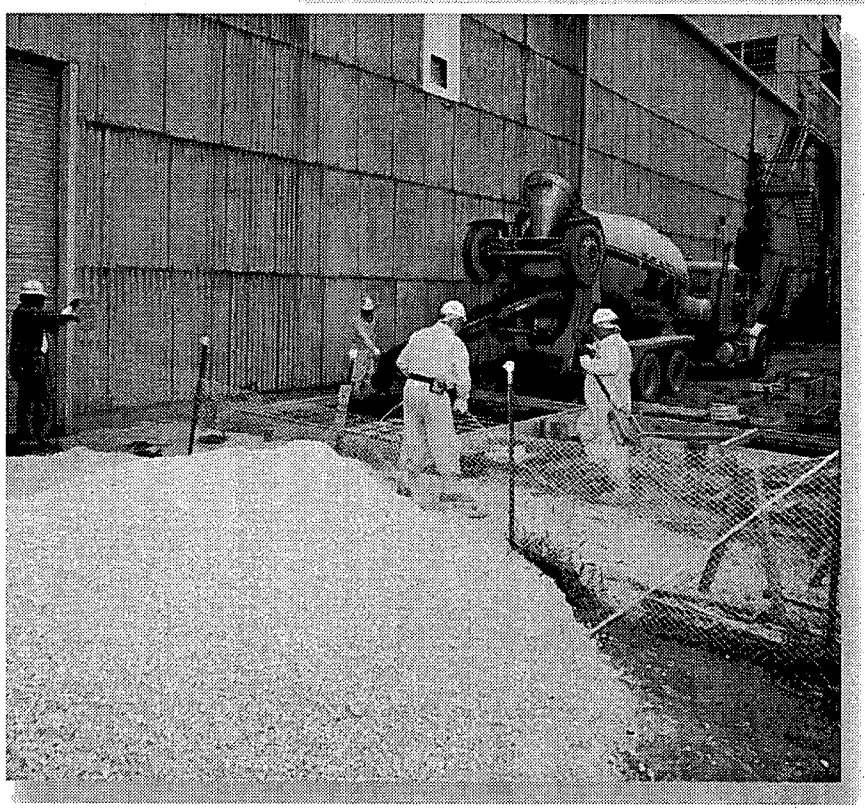
Mixed Waste Shipping — 307 drums of treated laundry sump cake were prepared for disposal and shipped to Envirocare in Utah.

Organic Extraction Project (RCI/Terra-Kleen) — Solvent washing of soils was completed with preliminary results indicating that treatment was successful. Contaminated solvent was successfully distilled and recovered for reuse, with contaminants concentrated for disposal.

Thorium Legacy Waste Stabilization Project — OHM, the project subcontractor, submitted Phase I documents (including the Project Specific Work Plan, Health & Safety Plan, and general construction/engineering documents) for review. All thorium waste from Building 81 was moved to Building 64/65, and housekeeping activities commenced to prepare 64/65 for use by the subcontractor.

Nuclear Materials Disposition (NMD) — In October, NMD began a major packaging effort involving both depleted and enriched unrestricted materials. As of October 31, 870 cans of enriched unrestricted materials were packaged into 29 white metal boxes. Under other NMD projects, packaging of normal ingots was completed during the month, as was packaging of depleted spill metal. Construction activities continued on the T-Hopper Project, which will involve repackaging of low enriched materials from T-Hopper containers (located west of Building 65) into 55-gallon drums.

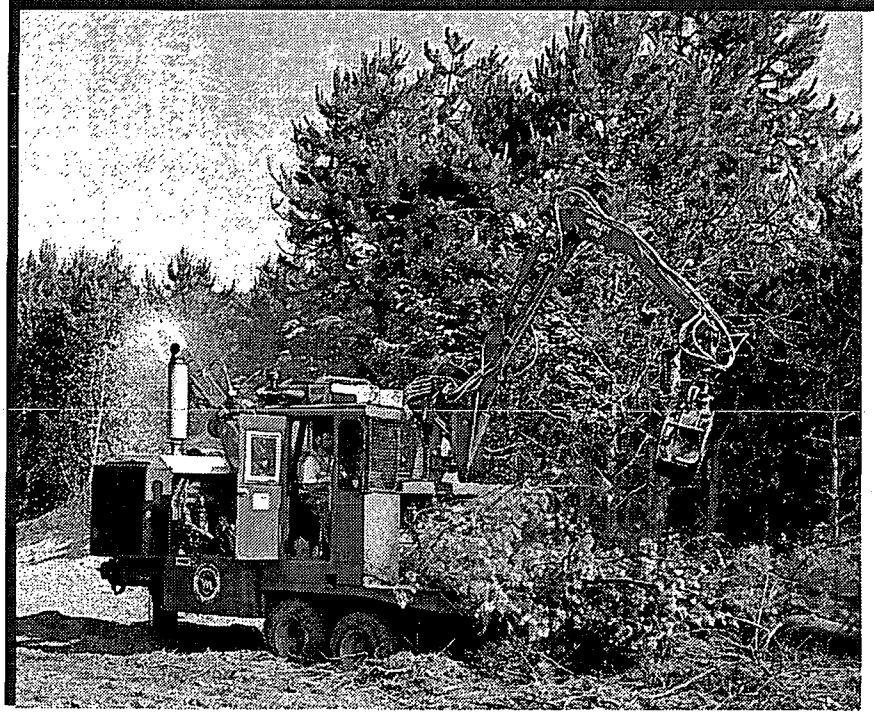




Above; Chemical operators overpacking Green Salt (UF4) in preparation for future sale. (6731-20)

Left; A concrete pad is poured for the T-Hopper Project on the east side of Plant 6. (6714-2)

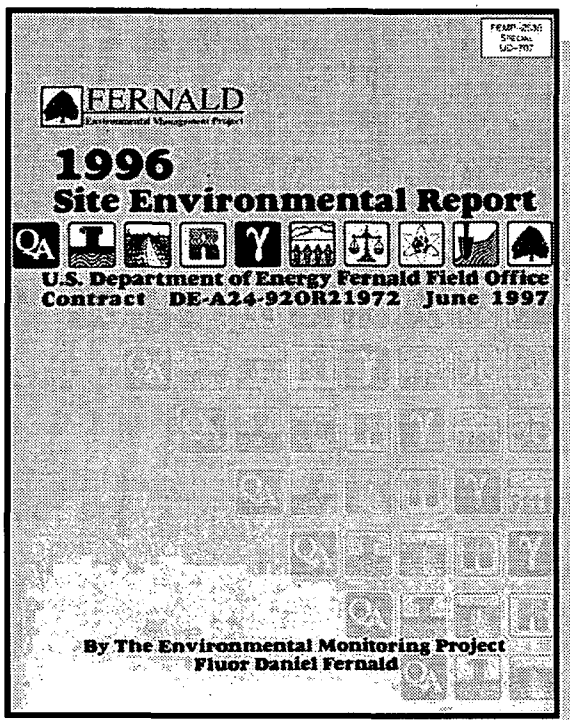
Landscape Changing at Southern Waste Units



Trees, brush and surface debris vanish almost in the blink of an eye as site preparation work progresses in the Southern Waste Units. Ultimately, the contaminated soil and waste material from the Active and Inactive Fly Ash Piles and the Southfield will be placed in the On-Site Disposal Facility. Before excavation starts a surface water control system will be built to ensure that material exposed to the elements during excavation does not leave the site. Ditches are being built to channel rainfall into three sediment basins. Trees and shrubs are being removed to make waste excavation more efficient.

The Southern Waste Units construction activities will be completed in March 1998. Excavation of the waste material is scheduled to start in the summer of 1998.

"Chippers" are used to clear the SWUs by uprooting and chipping trees and brush.
(6319-407)

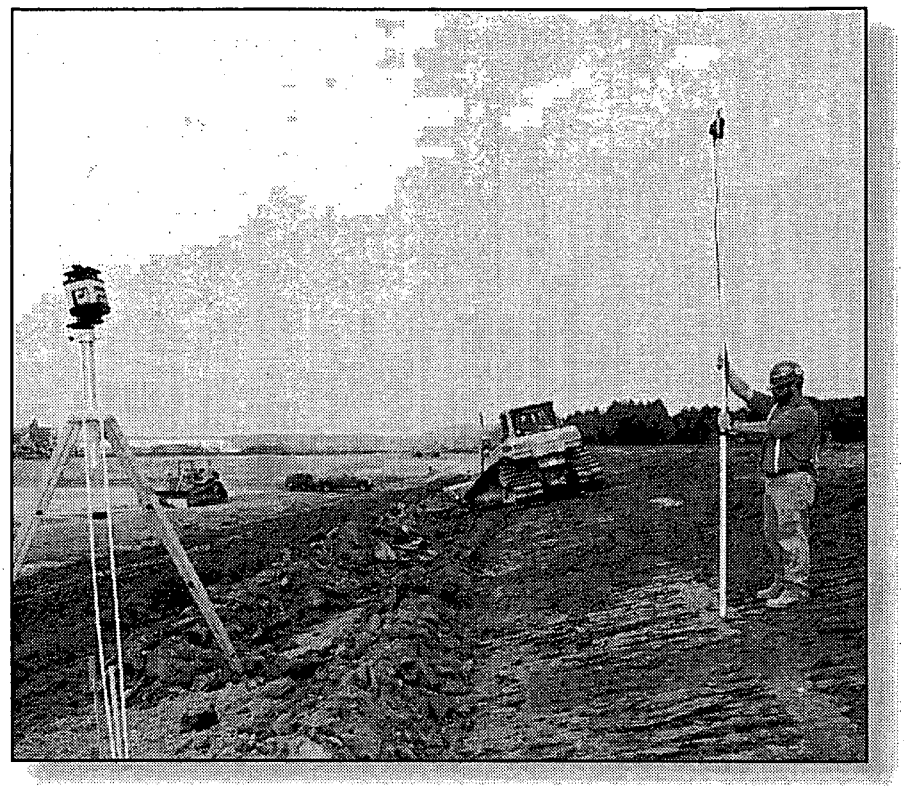


1996 Site Environmental Report Available at PEIC

Since 1959, an annual environmental report about the Fernald site has been published to meet the requirements of the DOE and state and federal regulators. The Site Environmental Report (SER) contains information relevant to your health as well as the safety of the environment. It describes results from environmental monitoring activities conducted at Fernald in 1996 and presents an overall view of the impact these activities have on the local environment and public health. Copies of the SER are available at DOE's Public Environmental Information Center, 10995 Hamilton-Cleves Highway, 513-648-7480.

Laser-Guided Bulldozer Ensures Precision in Cell Construction

Laser technology was deployed to perform soil grading during construction of the On Site Disposal Facility (OSDF) compacted clay liner. The traditional method of grading involves placing stakes every 10 to 100 feet and taking levels readings at and between each stake to determine if the surface has reached final grade. Laser technology provides greater accuracy on the grade, reduces the manpower necessary to perform the job, and increases the speed at which the grading can be done. Steve Brandstetter, project manager for Petro Environmental Technologies, Inc., said, "The laser bulldozer system allows us to fine grade the OSDF cell to very close tolerances in a matter of hours as opposed to days."



Laser technology uses a transmitter to generate a plane of light above the construction site. This plane of light provides a stable and accurate reference which allows a level surface or a specific steepness of slope to be constructed. After the desired final grade of the soil is programmed into the bulldozer, two laser receivers mounted on the blade of the bulldozer lock onto the laser signal from the transmitter, which is positioned nearby. As the bulldozer works, the lift and tilt of the blade are automatically adjusted to meet the programmed grading requirements. These automatic adjustments are performed up to 10 times-per-second and are based on the bulldozer blade's position relative to the plane of light created by the laser transmitter.

Two receivers attached to the bulldozer blade read the signal from the laser transmitter to adjust the lift and tilt of the blade. (6319-779)

October Tours

Above left: Representatives from U.S. Senator Mike DeWine's Washington and Cincinnati offices visited Fernald in October. From left: Tricia Thompson, Fluor Daniel Fernald Director of Public Affairs; Paul Palagyi, legislative aide; Jana Morford, district representative; and, Johnny Reising, DOE Associate Director of Environmental Management. (6732-1)

Left: Also in October, the Ohio Valley Section of the American Institute of Chemical Engineers held their monthly meeting at Fernald. Their evening tour included a stop at the Advanced Wastewater Treatment (AWWT) Facility. John Kappa, DOE project manager for the Aquifer Restoration Project, and Cathy Glassmeyer, a process engineer for Fluor Daniel Fernald, hosted the tour of the AWWT covering the multimedia filter project, the slurry dewatering facility and the current expansion of the facility. (6633-3)

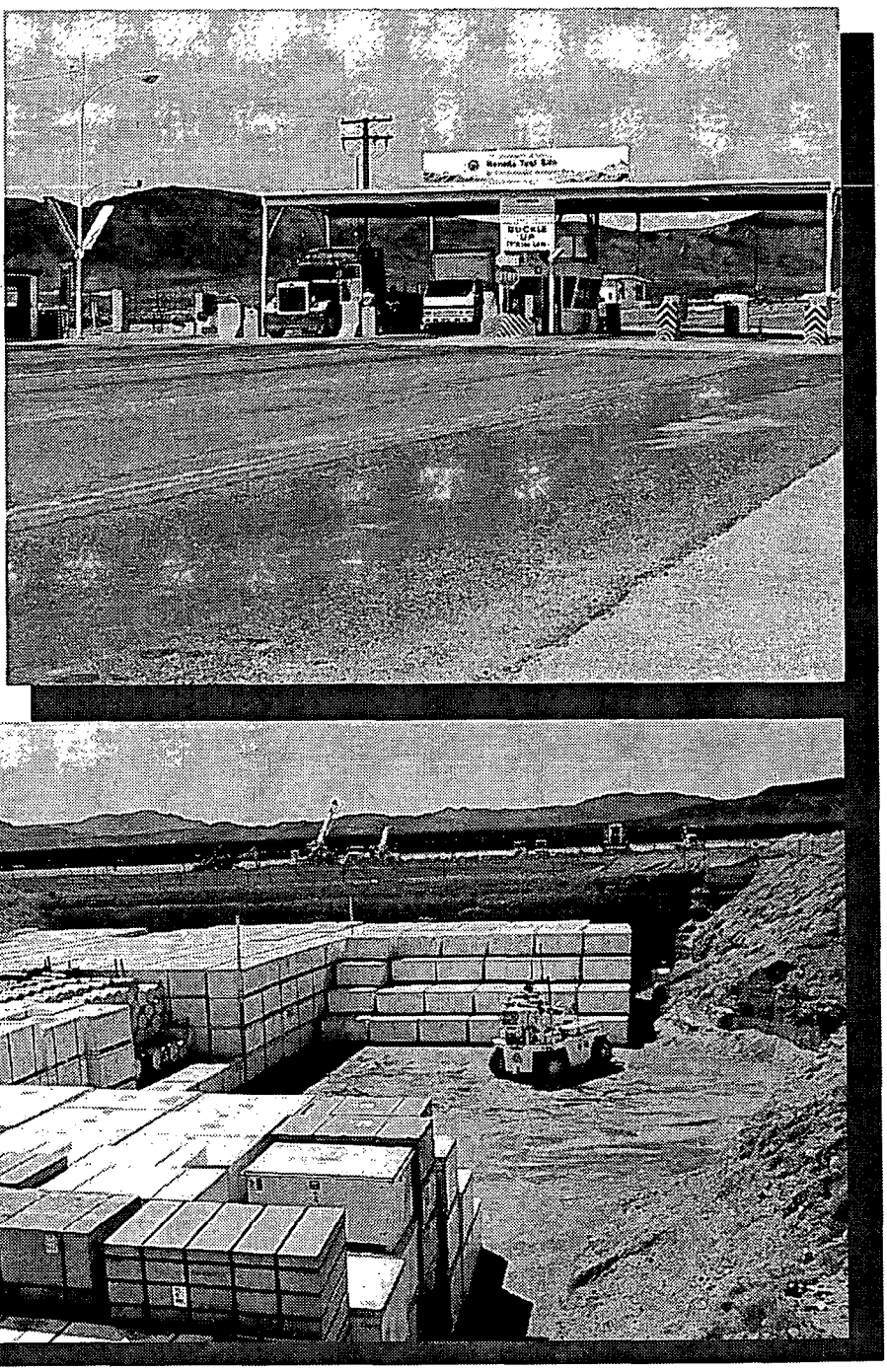
NTS Completes Fernald Audit

Auditors from the Department of Energy's Nevada Operations Office (DOE-NV) visited Fernald during the week of October 13, 1997, to conduct a triennial waste shipping certification audit. The DOE-NV auditors gave Fernald's waste shipping program an overall rating of "generally effective," issuing eight Corrective Action Requests, or CARs, on various issues associated with the program.

The auditors suggested to DOE-NV that they recommend to the Department of Energy's Fernald Environmental Management Project Office (DOE-FEMP) a lifting of the shipping suspension presently in effect for Waste Stream #6 - Residues. This waste stream has been under suspension since shortly after the May 1997 incident involving pressurization of a white metal box containing residues which were staged for shipment to the Nevada Test Site. DOE-NV issued such a letter late in the week of October 27, 1997, and resumption of shipping of Waste Stream #6 is likely to occur in the near future.

Right: The main entrance to the Nevada Test Site, through which 430 Fernald trucks passed last year. (6082-6)

Below: NTS workers carefully place, document and monitor the location of each waste shipment. (6082-20)

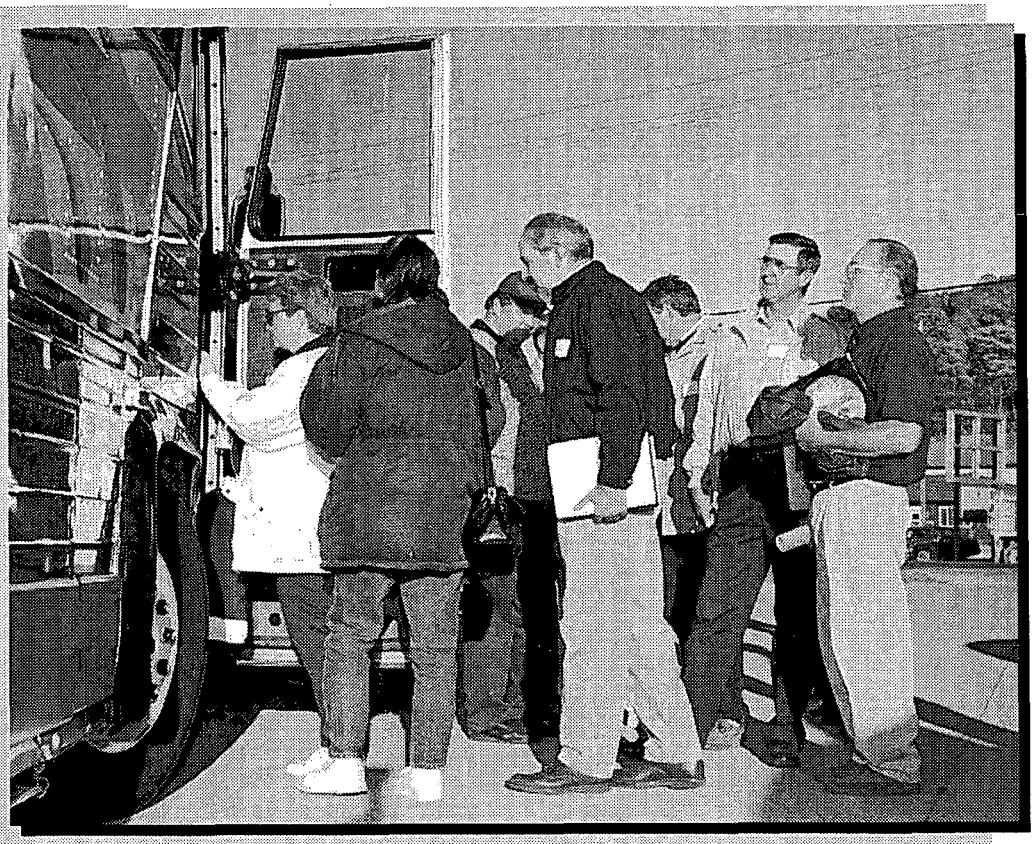


Stakeholders Get Firsthand Look at Fernald Site

On Tuesday, October 14, DOE and Fluor Daniel Fernald hosted a bus tour of the Fernald site for local residents, community leaders, elected officials, regulators, local media, and others interested in the cleanup of the site. Approximately 64 people participated in the 90-minute bus tour while DOE and Fluor Daniel Fernald project managers highlighted the major cleanup projects underway at the site. Johnny Reising, DOE associate director of Environmental Management said, "In the time I've spent at Fernald I've been on many tours, but this one was by far the most inclusive. We were able to see areas like the On-Site Disposal Facility, the Southfield and the northern railyard area that normally aren't readily accessible to the public. With all the ongoing activities, the timing for this tour was ideal."

Feedback from the public was extremely positive and supportive. Fernald stakeholders stressed they enjoyed the opportunity to observe the cleanup progress firsthand. After the tour, an Availability Session gave interested participants the opportunity to interact one-on-one with the project managers. "There is an unprecedented amount of in-the-field hands-on cleanup going on at Fernald. A tour is a great way to let the public see the projects up close," said Dennis Carr, Fluor Daniel vice president responsible for Soil & Water Projects. "We're doing things here that are just in the planning stages at other sites. We encourage everyone interested to follow our progress by visiting the site, attending our public meetings or taking a tour."

The tour was part of the Cleanup Progress Briefing, a new public involvement approach designed to give stakeholders a monthly update on key projects underway at Fernald.



Local residents agree — seeing the projects and how they fit in the "big picture" of site cleanup enhances their understanding. (6687-25)

Documents Available at the Public Environmental Information Center

- Waste Acceptance Criteria Project Specific Plan
- Waste Acceptance Criteria Attainment Plan
- South Plume Removal Action System Report for the period of Jan. 1 - June 30
- Draft Final Operations and Maintenance Master Plan for the Aquifer Restoration and Wastewater Treatment Project
- Fernald's 1996 Site Environmental Report
- On-Site Disposal Facility Impacted Materials Placement Plan (Revision H) and Specialized Placement Plan No. 1 for Oversized Metals and Over-length Structural Steel Beams/Columns
- National Environmental Protection Act and Wetland Documentation, Oct. 1997

- Transcripts from the following public workshops:

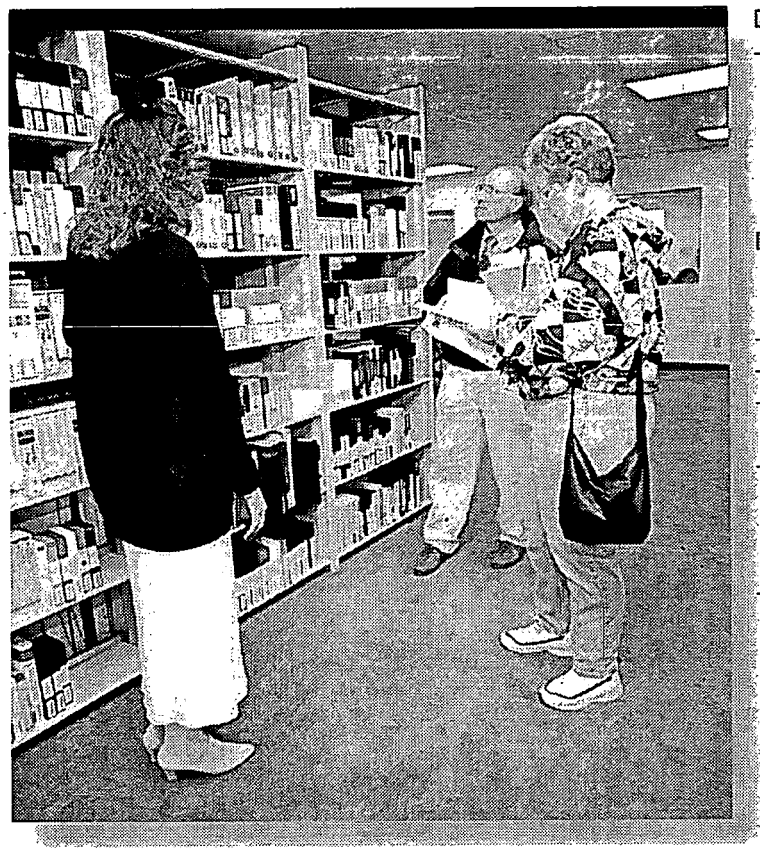
—July 14 Public Involvement Workshop
—Aug. 12 DOE Community Meeting
—Aug. 26 Silos Project Dispute Resolution Settlement Agreement Workshop

Did You Know.....

The U.S. Department of Energy's Public Environmental Information Center was created to provide convenient public access to documents about cleanup activities at the Fernald site.

The PEIC consists of:

- ☐ The Administrative Record — the body of documentation that was used to form the basis for selection of particular cleanup responses at the site.
- ☐ The Post Record-of-Decision File — this file marks the beginning of the remedial design/remedial action phase of the cleanup and contains information such as work plans, treatability studies, and design packages for each of the major projects.
- ▩ The Public Reading Room — contains information ranging from newspaper clippings to historical photos of the Fernald site. In addition there are more than 200 videos about various cleanup activities available for viewing at the PEIC.



- ☐ The Technical Information Center
  — A new addition to the PEIC, the Technical Information Center provides reference materials such as DOE orders, issues of the Federal Register, and Ohio Environmental Laws.
- ▩ PEIC Services — the PEIC offers many services to interested stakeholders including:
  — A copier available at no charge.
  — A microfiche reader/printer.
  — Two computer stations that provide access to the Internet.
  — A conference room equipped with an overhead projector and screen, VCR and monitor, two whiteboards, and a conference call phone.
  — A dedicated room to watch videos.

For more information call (513) 648-7480. The Public Environmental Information Center is located in the the Delta Building, 10995 Hamilton-Cleves Highway, Harrison, Ohio, just south of the Fernald site. (6740-5)

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